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ABSTRACT

The concurrent and predictive validity of four qualitative behavioral classes of social interaction (initiating and receiving positive and negative social interaction) was investigated using sociometric measures of peer acceptance (ratings) and friendship (nominations). Forty children (18 boys and 22 girls) selected from 14 third- and fourth-grade classrooms in a southeastern metropolitan city participated in the study. Subjects were chosen on the basis of low scores on two sociometric rating scales which measured the degree to which children like to "play with" and "work with" each other. Both sociometric and observational measures were used in the study. Correlational analyses showed significant relationships between behavioral and sociometric measures, thus supporting previous findings among preschool populations. Stepwise multiple regression analyses suggested that receiving social interaction from peers best predicted overall acceptance whereas initiating social interactions best predicted children's friendship patterns. Tentative implications for the behavioral assessment of children's social skills are discussed. It is concluded that the results reinforce the idea that social competence is multidimensional and should be assessed behaviorally using multifactored assessment techniques. (Author/RH)

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Social Interactions as Predictors of Children's Likeability and Friendship Patterns: A Multiple Regression Analysis

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Abstract

The concurrent and predictive validity of four qualitative behavioral classes of social interaction (initiating and receiving positive and negative social interaction) was investigated using sociometric measures of peer acceptance (ratings) and friendship (nominations). Correlational analyses showed significant relationships between behavioral and sociometric measures supporting previous work with preschool populations. Stepwise multiple regression analyses suggested that receiving social interaction from peers best predicted overall acceptance whereas initiating social interactions best predicted children's friendship patterns. Tentative implications for the behavioral assessment of children's social skills were discussed.

Key Words:

Social interaction
Acceptance
Friendship
Predictors

Social Interactions as Predictors of Children's Likeability and Friendship Patterns: A Multiple Regression Analysis

Social skills training with children has received an abundance of attention during the past five years from behavioral researchers. This is evidenced by the large number of review articles (Cartledge & Milburn, 1978; Combs & Slaby, 1977; Gresham 1981a; Van Hasselt, Hersen, Whitehill, & Bellack, 1979) and books (Bellack & Hersen, 1979; Cartledge & Milburn, 1980; Rathjen & Foreyt, 1980) on this topic. These reviews generally conclude that social skills training techniques have been effective in teaching social skills to children.

Much less attention has been directed toward the investigation of specific social skills assessment measures. As such, there is a paucity of data concerning the reliability and validity various social skills assessment measures. At least three reviews have been written on the assessment of children's social skills (Foster & Ritchey, 1979; Green & Forehand, 1980; Gresham 1981b). These reviews agree that the most frequently used methods of assessing children's social skills are sociometric measures, behavioral observations, and teacher ratings. Most social skills training studies have used only one type of social skill assessment method as the primary selection and outcome measure (Gresham, 1981a). In the behavioral literature, behavioral observations are used in approximately 2/3 of the studies and sociometric measures in less than 10% of the studies. Multiple outcome measures have been used

in only 25% of the social skills training studies (Gresham, Note 1). Teacher nominations (Bolstad & Johnson, 1972; Evers & Schwarz, 1973; O'Connor, 1969, 1972) and teacher ratings (Milburn, Note 2; Reardon, Hersen, Bellack, & Foley, Note 3; Stodden, Note 4) have been used less frequently.

Green and Forehand (1980) maintain that the construct of social skills is in need to basic development. These authors suggest that much more research should be conducted in establishing the construct, concurrent, and predictive validity of various social skills assessment techniques.

The primary purpose of the present study is to investigate the criterion-related (both concurrent and predictive) validity of children's social interactions as measures of social skill. The temporal reliability of various social skills measures was also investigated to determine the stability of behavioral and sociometric measures. Past research has investigated the concurrent validity of social interaction and sociometric measures using correlational methods (Gottman, 1977; Gottman, Gonso & Rasmussen, 1975; Hartup, Glazer, & Charlesworth, 1967). Since these measures tend to be intercorrelated, a stepwise multiple regression analysis which would take into account these intercorrelations to produce the best model for predicting social acceptance seemed appropriate. The following section will briefly review the sociometric and behavioral measures used in the current investigation.

Sociometric and Behavioral Measures

Behavioral researchers are increasingly employing sociometric methods

as selection, outcome, and social validation measures in social skills training investigations (Gottman, Gonso, & Schuler, 1976; Gresham & Nagle, 1980; LaGreca & Santogross; 1980; Oden & Asher, 1977). Sociometrics have not been considered traditional behavioral assessment devices because they do not specify antecedent behaviors which may lead to high or low levels of peer acceptance. The major advantage of sociometrics is their use as selection and social validation measures. Using peers as judges to validate the effectiveness of social skills training is a means of establishing social validity (Van Houten, 1979; Wolf, 1978).

Sociometrics are usually presented in peer nomination or peer rating scale formats. In the peer nomination format, children are asked to choose a specified number of peers according to a specified criterion. For example, children may be asked to nominate their three best friends and/or their three favorite work partners in the classroom. With peer ratings, children are asked to rate their classmates on 3-point or 5-point Likert scales according to specified criteria (e.g., play partners, work partners, etc.). A child's score is the average of the ratings received from same-sex peers since there appears to be considerable sex bias in children's sociometric ratings (Singleton & Asher, 1977).

There is some evidence to suggest that peer nominations and peer ratings assess different aspects of sociometric status. Hymel and Asher (1977) speculated that peer nominations measure who a child's best friends are whereas peer ratings measure a child's overall acceptability or likeability in the peer group. To support this assumption Hymel and Asher found that of the 23 children in their sample who received no peer nominations, 11 received fairly high peer ratings (above 3.00 on a 5-

point rating scale). Gresham (1981c) found support for this distinction between likeability and friendship in a factor analytic investigation of nomination and sociometric measures. This distinction between likeability (acceptance) and friendship is an interesting one that requires further investigation.

Naturalistic observation is perhaps the most face valid method of assessing children's social skills (Asher & Hymel, 1980). Observations in naturalistic environments have the advantage over sociometric measures in that they can identify the antecedents and consequences of certain social behaviors. Observations possess some evidence of concurrent validity as they correlate moderately with some sociometric measures (Hartup et al., 1967) and teacher nominations (Bolstad & Johnson, 1972). Direct observations have also shown relatively strong correlations among themselves such as the correlation between rates of giving and receiving positive and negative social reinforcement in preschool populations (Charlesworth & Hartup, 1967; Hartup et al., 1967; Keller & Carlson, 1974).

The foregoing review suggests some relationship between two diverse methods of assessing children's social skills: sociometrics and behavioral observations. The following study investigates the validity of several categories of social behavior in predicting sociometric status using stepwise multiple regression procedures.

Method

Subjects

Forty children (18 boys and 22 girls) selected from 14 third- and

fourth-grade classrooms in a southeastern metropolitan city served as subjects. Subjects were chosen on the basis of low scores on two sociometric rating scales which measured the degree to which children like to "play with" and "work with" each other. Initially, the four lowest rated children (2 boys and 2 girls) in each of the 14 classrooms were selected yielding 56 children. From this original pool of 56 children, 40 were randomly selected for participation.

Low-status children were selected because this study was part of a larger investigation concerning social skills training with children. Selected children were rated by 462 peers in 14 classrooms on two Likert-type sociometric scales (play with and work with) which ranged in value from 1 (not at all) to 5 (very much). Composite scores on the two scales (play with & work with) were used to select the lowest rated children. The classrooms had an average enrollment of 31 children with approximately equal sex representation. Only same-sex ratings were used to select subjects for participation.

Social Skill Measures

Both sociometric and observational measures were used in the current project. Descriptions of each of these measures are given below.

Sociometric measures. Three categories of peer nominations and two categories of peer ratings constituted the sociometric measures. Peer nominations consisted of best friends, play with, and work with nominations. Nominations were collected from the 462 children in the 14 classrooms previously described. Children in each of the classrooms were asked to nominate their three best friends, three people they would most like to play with, and three people they would most like to work with, respectively.

Only same-sex nominations were used for analysis.

On the peer rating scales (previously described), children in each of the 14 classrooms were asked to rate every member of the class on a 1 to 5 scale according to how much they liked to play with and work with them. Only same-sex ratings were used for analysis.

Observational measures. Four categories of social interaction in the classroom comprised the observational data. The four categories were: 1) rates of initiating positive peer interaction, 2) rates of initiating negative peer interaction, 3) rates of receiving positive peer interaction, and 4) rates of receiving negative peer interaction. Each of the four categories had four subcategories of physical, verbal, cooperative/uncooperative, and nonverbal. These categories were selected on the basis of past research which suggests that rates of initiating and receiving positive and negative social interaction are correlated and predictive of social acceptance (Charlesworth & Hartup, 1967; Greenwood, Walker, & Hops, 1977; Hartup et al., 1967; Keller & Carlson, 1974).

Only the major categories of initiating and receiving positive and negative interaction were used for analysis. A fine-grained coding of the subcategories would have been desirable, however, subcategories were collapsed within each category to facilitate recording and observer agreement estimates.

Procedure

All measures were collected three times over a period of six weeks. Assessments took place in late-March (Time 1), mid-April (Time 2), and early-May (Time 3). Thus, each of the 40 subjects had a total of 27 mea-

sures collected on them (nine measures for each of the three times) yielding 1,080 observations for the entire sample.

Peer rating sociometrics were collected by giving sheets of paper to each child in the 14 classrooms with each class member's name typed on separate lines. A series of five faces ranging from frowns to smiles with corresponding numbers (1-5) ran across the page horizontally. Each face represented one point on the five-point scale. Every child was rated on the "play with" and "work with" scales respectively. Subsequent to the completion of the peer rating scales, the three peer nomination measures were administered. Children were asked to write on a piece of paper their three best friends, three people they would most like to play with, and three people they would most like to work with. Ratings and nominations were collected three weeks later (Time 2) and three weeks after that at Time 3. Teachers in each of the 14 classrooms administered the sociometrics for all three time periods.

Trained observers collected behavioral observations for Times 1, 2, and 3. Five observers were trained over a period of 12 days (five hours training) in the observational code to an average interobserver agreement of 80% (see Appendix). Each target child was observed a total of 10 minutes over a period of two days (5 minutes each day) for each of the three time periods. A sequential time sampling procedure (Thomson, Holmberg, & Baer, 1974) was used and observations were collected in the morning and sampled from small group activities, group discussion, lecture, and individual work at desk.

Five-minute observations for each day were divided into 30, 10-second intervals and target children's behavior was recorded sequentially over

the 30 intervals. Behavior was observed at the end of each 10-second interval and recorded as occurring or not occurring relative to the four categories. Observers recorded the behavior during the next five seconds and then moved on to the next target child for observation. For example, if a class had four target children, Child 1's behavior would be observed for 10 seconds and if it occurred at the 10th second of that interval, it was recorded. The observer then located Child 2 and recorded his/her behavior if it occurred at the 10th second and so on until all four children in that class had been observed for 30 intervals. The same procedure was repeated for the second 5-minute observation day for all target children. Rates of behavior were based on 60 intervals observation (30 intervals each day). The average rates of behavior over the two-day observation was used for data analysis for all three time periods.

To protect against observer bias and drift, observers were kept blind to the purpose of the investigation and observers were rotated during reliability checks. Reliability checks were conducted randomly four times during each observation period. Percent agreement was calculated on an interval-by-interval basis using the following formula:

$$\text{Agreement} = \frac{\text{Number of agreements}}{\text{Number of agreements} + \text{Number of disagreements}} \times 100$$

Agreement estimates ranged from .61 to .83 for Time 1, .72 to .85 for Time 2, and .63 to .93 for Time 3. Table 1 presents overall and median reliability scores for each class of behaviors for each of the three time periods.[2]

Results

All data were analysed using the Correlation and Stepwise procedures of the Statistical Analysis System (SAS, 1979). Table 2 presents the stability coefficients for behavioral and sociometric measures over the three time periods.

Insert Tables 1 and 2 about here

From Table 2 it is apparent that the highest stability coefficients were from Time 2 to Time 3 ($\bar{x}$ = .58) and the least stable coefficients were from Time 1 to Time 3 ($\bar{x}$ = .33). Suprisingly, the average stability coefficients for the behavioral measures ($\bar{x}$ = .413), the sociometric ratings ($\bar{x}$ = .406), and the sociometric nominations ($\bar{x}$ = .413) were almost identical. This is in contrast to earlier work by Asher and Hymel (1981) which suggests that sociometric ratings are more stable than sociometric nominations or behavioral observations of social skills.

Table 3 presents the composite correlation matrix (Time 1 + Time 2 + Time 3) for the behavioral and sociometric measures. This matrix can be taken as evidence for the concurrent validity of the behavioral measures used in the present study.[3] Twenty-nine of the 36 possible nonredundant correlations attained statistical significance ($p < .05$). On the average, the behavioral measures correlated more highly with the sociometric

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Insert Table 3 about here

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nominations ($\bar{x}$ = .345) than with the sociometric rating scales ($\bar{x}$ = .301).

Table 3 also suggests that for the sociometric rating scales, the behaviors of receiving positive and negative social interaction were slightly (but not significantly) better predictors ($\bar{x}$ = .35) than the behaviors of initiating positive and negative social interaction ($\bar{x}$ = .27). Conversely, the behaviors of initiating positive and negative social interaction were slightly better predictors of sociometric nominations ($\bar{x}$ = .40) than the behaviors of receiving positive and negative social interaction ($\bar{x}$ = .33).

Moderate correlations were also found among the four behavioral measures. Positive relationships were found between rates of initiating and receiving positive peer interaction (r = .67, $p < .0001$) and rates of initiating and receiving negative peer interaction (r = .59, $p < .0001$). Lower, but significant, inverse relationships were found between rates of initiating positive and negative interaction (r = -.34, $p < .02$) and receiving positive and negative interaction (r = -.38, $p < .01$). These findings support previous work with preschoolers that has demonstrated significant relationships between rates of giving and receiving positive and negative social reinforcement (Hartup et al., 1967; Keller & Carlson, 1974).

In summary, the correlational data in Table 3 offers evidence for the validity of the behavioral measures of initiating and receiving positive and negative peer interaction in predicting sociometric status as measured by sociometric ratings and nominations. Moreover, the different pattern of correlations between the behavioral measures and the sociometric measures suggest that peer ratings and peer nominations may be assessing separate aspects of sociometric status (Hymel & Asher, 1977).

Although the correlations in Table 3 shed some light on the relation-

ship between behavioral and sociometric measures, the correlation procedure does not take into account the degree of intercorrelation between the behavioral measures in predicting sociometric status. To compensate for this intercorrelation, five separate stepwise multiple regression analyses using the four social interaction measures as predictors and the five sociometric measures as criteria were performed.

Table 4 presents the multiple regression analyses for the play with (PWR) and work with (WWR) rating scales. As can be seen from Table 4, receiving negative peer interaction was the best predictor of sociometric status as measured by the PWR, $F(1 \& 38) = 5.81$, $p <$

Insert Table 4 about here

.02, accounting for over 13% of the variance. The addition of receiving positive peer interaction accounted for an additional 4% of the variance yielding a significant 2-variable model, $F(2 \& 37) = 3.82$, $p < .03$. The addition of initiating positive and initiating negative peer interaction in 3- and 4- variable models respectively, did not add significantly to the prediction.

Using the work with rating scale (WWR) as the criterion, Table 4 shows that receiving positive interaction was the best predictor of sociometric status, $F(1 \& 38) = 7.48$, $p < .009$. The addition of receiving negative peer interaction in a 2- variable model accounted for an additional 3% of the variance, $F(2 \& 37) = 4.46$, $p < .01$. The 3- variable model of receiving positive, receiving negative, and initiating negative peer interaction accounted for almost 20% of the variance in WWR, $F(3 \& 36) = 2.98$, $p < .04$. Initiating negative peer interaction in a 4- variable model did not add significanlty to

the prediction ($p > .05$).

Table 5 presents the stepwise multiple regression analyses for the play with (PW), work with (WW), and best friends (BF) peer nomination measures. As can be seen from Table5 , the social interaction

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Insert Table5 about here

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measures best predicted the play with nomination measure. Initiating negative peer interaction was the best predictor of the PW nomination accounting for over 22% of the variance, $F(1 \& 38) = 10.92$, $p < .002$. The 4- variable model accounted for over 34% of the variance, $F(4 \& 35) = 4.59$, $p < .004$.

Using the WW nomination as the criterion, initiating negative peer interaction was the best predictor accounting for almost 17% of the variance ($F(1 \& 38) = 7.70$, $p < .008$. Only the addition of initiating positive and receiving negative interaction in a 3- variable model added significantly to the prediction, $F(3 \& 36) = 3.03$, $p < .04$.

Finally, as in the PW and WW measures, initiating negative peer interaction was the best predictor of the BF nomination measure, $F(1 \& 38) = 6.64$, $p < .01$. The addition of initiating and receiving positive interaction accounted for nearly 21% of the variance $F(3 \& 36) = 3.12$, $p < .03$.

In summary, the social interaction measures accounted for similar amounts of variance using the rating scale and nomination sociometrics. The one exception to this is the play with nomination from which the interaction measures predicted over 34% of the variance. Also, it is interesting to note that for all of the nomination measures, initiating

negative peer interaction was the best predictor which was followed by initiating positive interaction in every case. Overall, the social behaviors which involved receiving interactions (positive and negative) best predicted peer acceptance (peer rating scales) and the behaviors that involved initiating (positive and negative) best predicted friendship patterns (peer nomination measures).

Discussion

The behaviors of initiating and receiving positive and negative social interaction significantly predicted children's acceptance and friendship patterns. These data support previous correlational research which has shown relationships between positive and negative social interactions and sociometric status (Charlesworth & Hartup, 1967; Gottman et al., 1975; Hartup et al., 1967). Additionally, the current research supports previous investigations that have demonstrated the reciprocal nature of giving and receiving positive and negative social reinforcement (Hartup et al., 1967; Keller & Carlson, 1974).

The correlations between the interaction measures and the sociometric measures offer evidence for the concurrent validity of the behavioral classes used (i.e., initiating and receiving positive and negative social interaction) in this investigation. The positive interactions included the subclasses of physical (embracing, shaking hands, patting, etc.), verbal (positive verbalizations), cooperation (sharing, working with others, etc.), and nonverbal (smiling, laughing, nods, etc.). Negative interactions included these same four subclasses except the interactions were coded as negative (grabbing, hitting, verbal

aggression, not sharing, frowns, etc.). The correlations in Table 3 suggest that the general behavioral classes of social interaction were slightly better prediction of children's friendship pattern (as measured by peer nominations) than they were of children's acceptance patterns (as measured by peer ratings). Caution should be exercised in intrepreting these results because of the nature of the sample (poorly accepted children) and the rather limited number of behavior classes used. It could be that different correlation patterns would be found with different samples and different combinations of behavioral measures.

It would have been desirable to use a more molecular categorization of social behaviors as predictors rather than the general behavioral classes used in the present investigation. Other studies have used such micro-behaviors in regression studies of social skill with delinquent (Spence, 1981) and adult (Romano & Bellack, 1980) populations. The present study did not attempt such a micro-analysis because of the relatively low frequency of some behavior subcategories (e.g., positive physical interactions and negative nonverbal interactions) and the problems with obtaining adequate levels of interobserver agreement. Future investigations should assess the relative contributions or weightings of specific behaviors in predicting sociometric status.

The stepwise multiple regression analyses present a more accurate picture of the relationship between behavioral and sociometric measures since the predictors (social interaction classes) were moderately intercorrelated. The best predictors of children's acceptance (PWR and WWR) involved the process of <u>receiving</u> social interactions (positive and negative). Thus, it appears from these data that overall acceptance

(or unacceptance) in the peer group is best predicted by the reception of social interaction from peers. For the PWR and WWR, reception of social interaction accounted for 17.1% and 19.4% of the variance respectively. Initiation of social interaction accounted for only .9% and .6% in peer ratings respectively.

Conversely, the best predictors of children's friendship patterns (PW, WW, and BF) involved the process of initiating social interactions (positive and negative). For each of the three nomination measures, initiation of social interaction accounted for 31.4%, 19.8%, and 20% of the variance respectively. Reception of social interaction accounted for only .3%, .3%, and .7% of the variance respectively. Overall, initiating negative interaction was a much better predictor of friendship patterns than initiating positive interaction.

Some tentative implications for social skills assessment and training can be identified from these data. First, it appears that poorly accepted children may be identified more by the rates at which they receive social interactions from others than by the rates at which they initiate interactions with others. From simply a correlational standpoint, the data suggest that peer acceptance is more of a passive process in which interactions are received from others noncontingently. Surely this is not the case since children probably receive positive or negative social interactions contingently. Future observational research should investigate antecedent behaviors or response chains that occasion the reception of positive and negative social interactions.

The present data also suggest that the best predictors of children's friendship patterns involve the active process of initiating social

interactions. This supports past research that indicates friendship-making skills involve active behaviors of greeting, asking for and giving information, extending offers of inclusion, and effective leave taking (Gottman et al., 1975; Gottman et al., 1976; Oden & Asher, 1977). It is unknown from the present study which specific behaviors under the behavioral class of initiating social interaction best predicted friendship.

Past efforts to identify the relationship between social interactions and sociometric status have used correlational analyses which do not take into account the degree of intercorrelation between predictors. Moreover, past research has tended to use nomination measures (Hartup et al., 1967) instead of peer rating measures as criteria. The present investigation corrects some of these past deficiencies by using stepwise regression analyses and investigating peer rating as well as peer nomination measures. Hopefully, future research will heed Green and Forehand's (1980) advice and investigate the topographic components and the contextual factors relating to children's social skills. This study along with the work of Green, Forehand, Beck and Vosk (1980) reinforces the notion that social competence is multidimensional and should be assessed behaviorally using multifactored assessment techniques.

Table 1

Agreement Estimates for Behavior Classes for Three Times Periods

Behavior Class	Time 1	Time 2	Time 3	Median
Initiating Positive Peer Interaction	.82	.84	.93	.84
Initiating Negative Peer Interaction	.83	.82	.93	.82
Receiving Positive Peer Interaction	.61	.72	.63	.63
Receiving Negative Peer Interaction	.83	.85	.92	.85

Table 2

Stability Coefficients for Behavioral and

Sociometric Measures

Measures	Time 1-Time 2	Time 2-Time 3	Time 1-Time 3
Initiating Positive Peer Interaction	.39	.80	.37
Initiating Negative Peer Interaction	.23	.56	.27
Receiving Positive Peer Interaction	.45	.67	.30
Receiving Negative Peer Interaction	.20	.40	.32
Play with Rating	.30	.59	.39
Work with Rating	.33	.63	.20
Play with Nomination	.62	.52	.32
Work with Nomination	.34	.50	.28
Best Friends Nomination	.19	.53	.22

Note: Coefficients .31 or higher significant at .05 level

Table 3

Composite Correlation Matrix and P Values

	PWR	WWR	PW	WW	BF	IP	IN	RP	RN
PWR		.88 .0001	.44 .004	.52 .0007	.55 .0002	.29 .06	-.30 .05	.32 .04	-.36 .02
WWR			.38 .01	.44 .004	.48 .001	.24 .13	-.26 .10	.41 .009	-.31 .04
PW				.84 .0001	.74 .0001	.44 .004	-.47 .002	.24 .13	-.32 .04
WW					.76 .0001	.36 .05	-.41 .008	.27 .09	-.31 .04
BF						.35 .02	-.3[illegible] .01	.23 .14	-.29 .07
IP							-.34 .03	.67 .0001	-.36 -.02
IN								-.41 .008	.59 .0001
RP									-.38 .01
RN									

*PWR = Play With Rating Scale, WWR = Work With Rating Scale, PW = Play With Peer Nomination, WW = Work With Peer Nomination, BF = Best Friends Peer Nomination, IP = Initiating Positive Interaction, IN = Initiating Negative Interaction, RP = Receiving Positive Interaction, and RN = Receiving Negative Interaction.

**Correlation coefficients computed on linear composite scores of measures from all three time periods (Time 1 + Time 2 + Time 3).
n = 4[illegible] (composite scores)

Table 4

Stepwise Regression for Sociometric Ratings Composite
(Time 1 + Time 2 + Time 3)

a) Play With Rating Scale

Step Number	Behavior Variable* Entered	Multiple R Value	Degrees of Freedom	F Value	Significance Level
1	Receiving Negative Peer Interaction	.132	1 & 38	5.81	$p < .02$
2	Receiving Positive Peer Interaction	.171	2 & 37	3.82	$p < .03$
3	Initiating Positive Peer Interaction	.177	3 & 36	2.58	$p < .06$
4	Initiating Negative Peer Interaction	.180	4 & 35	1.93	$p < .12$

b) Work With Rating Scale

Step Number	Behavior Variable* Entered	Multiple R Value	Degrees of Freedom	F Value	Significance Level
1	Receiving Positive Peer Interaction	.165	1 & 38	7.48	$p < .009$
2	Receiving Negative Peer Interaction	.194	2 & 37	4.46	$p < .01$
3	Initiating Positive Peer Interaction	.199	3 & 36	2.98	$p < .04$
4	Initiating Negative Peer Interaction	.200	4 & 35	2.18	$p < .09$

*Behavior Variables are a composite of all 3 Time Periods (Time 1 + Time 2 + Time 3)

Table 5

Stepwise Regression for Sociometric Nominations Composite
(Time 1 + Time 2 + Time 3)

a) Play With Rating Scale

Step Number	Behavior Variable* Entered	Multiple R Value	Degrees of Freedom	F Value	Significance Level
1	Initiating Negative Peer Interaction	.223	1 & 38	10.92	$p < .002$
2	Initiating Positive	.314	2 & 37	8.47	$p <$ [illegible]
3	Receiving Positive Peer Interaction	.344	3 & 36	6.30	$p < .001$
4	Receiving Negative Peer Interaction	.344	4 & 35	4.59	$p < .004$

b) Work With Nomination

1	Initiating Negative Peer Interaction	.168	1 & 38	7.70	$p < .008$
2	Initiating Positive	.198	2 & 37	4.59	$p < .01$
3	Initiating Negative	.201	3 & 36	3.03	$p < .04$
4	Receiving Positive	.201	4 & 35	2.21	$p < .08$

Table 5 continued

Stepwise Regression for Sociometric Nominations Composite
(Time 1 + Time 2 + Time 3)

c) Best Friends Nomination

Step Number	Behavior Variable* Entered	Multiple R Value	Degrees of Freedom	F Value	Significance Level
1	Initiating Negative Peer Interaction	.148	1 & 38	6.64	$p < .01$
2	Initiating Positive Peer Interaction	.200	2 & 37	4.65	$p < .01$
3	Receiving Positive Peer Interaction	.206	3 & 36	3.12	$p < .03$
4	Receiving Negative	.207	4 & 35	2.29	$p < .07$

*Behavior Variables are a composite of all 3 Time periods (Time + 1 + Time 2 + Time 3)

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Footnotes

1. The current data were gathered as part of a larger research project concerning social skills assessment and training in children.
2. Percent agreement was calculated on occurrences plus non-occurrences of target behavior classes.
3. Behavior observational categories and definitions may be obtained from the author by request.